Volume 38, 1994

Editor-in-Chief

IFG Hampton, Leeds

Editors

A Auliciems, Australia NN Barthakur, Canada U Blum, USA M Cabanac, UK RF Dale, USA DM Driscoll, USA AE Gale, Australia R Goldsmith, UK J Grace, UK H Grant, USA

R Hardeland, Germany

WO Haufe, Canada
PR Höppe, Germany
M Iriki, Japan
E Jauregui, Mexico
HD Johnson, USA
AR Maarouf, Canada
T Nagasaka, Japan
RJ Reiter, USA
H Richner, Switzerland
GW Robertson, Canada
W Selvamurthy, India
MJ Tipton, UK
W Weihe, Germany
D Whitehead, New Zealand
F Wilmers, Germany



Springer International

International Journal of Biometeorology

Copyright

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the ISB; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the ISB.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with the respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or inhouse use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0020-7128, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Universitätsdruckerei H. Stürtz AG, Würzburg, Germany

© International Society of Biometeorology 1995 Printed in Germany

ontents

5. 1 pp 1 - 56 published May 1994 5. 2 pp 57-110 published January 1995 5. 3 pp 111-170 published March 1995 5. 4 pp 171-218 published May 1995

bramson $E \to Stoupel\ E$ bstracts 108 gishi $Y \to Ohtsuka\ Y$ rad Z, Goldenberg S, Heller J: Water balance and resistance to desiccation in rock-dwelling snails 78 raki $T \to Inoue\ Y$ sano $K \to Takeoka\ M$ sano $K \to Terasawa\ K$ simakopoulos $DN \to Tselepidaki\ IG$

eaubien EG, Johnson DL: Flowering plant phenology and weather in Alberta, Canada 23 entham $G \rightarrow Langford IH$ haumik G, Srivastava KK, Selvamurthy W, Purkayastha SS: The role of free radicals in cold injuries 171 ook review 218 rönner $N \rightarrow H\ddot{o}ppe P$

'arrión García JS → Munuera Giner M 'haudhuri BN → Rawal SB

Deyhim F, Teeter RG: Effect of heat stress and drinking water salt supplements on plasma electrolytes and aldosterone concentration in broiler chickens 216 Priscoll DM: Weather and childbirth: a further search for relationships 152

l-Sabban F, Fahim MA: Local cerebral hyperthermia induces spontaneous thrombosis and arteriolar constriction in the pia mater of the mouse 92 nright NJ → Freitas CR de voh DB → Fasheun TA

ahim MA → El-Sabban F
asheun TA, Ologun AG, Eyoh DB,
Ovoleye AK, Isim S: Physiological
responses of growing Large White boars
in three management environments 98
olk GE Jr: The professional lifetime of
Solco W Tromp – a primary advocate of
environmental influences 3
organ B → Nunez M
eitas CR de, Enright NJ: Microclimatic
differences between and within canopy
gaps in a temperature rainforest 188

jisawa H → Ohtsuka Y

jiwara T → Takeoka M

jiwara T → Terasawa K

abbay $U \rightarrow Stoupel E$ oldenberg $S \rightarrow Arad Z$ rant RH, Scheidt AB, Rueff LR: Aerosol transmission of a viable virus affecting swine: explanation of an epizootic of pseudorabies 33

Handelman M → Stoupel E
Hansing O → Wittich K-P
Hasebe Y, Iriki M, Takahasi K: Usefulness
of R-R interval and its variability in
evaluation of thermal comfort 116
Heisler GM → Yang X
Heller J → Arad Z
Höppe P, Lindner J, Praml G, Brönner N:
Effects of environmental ozone on the
lung function of senior citizens 122

Inoue Y, Nakao M, Ueda H, Araki T:
Seasonal variation in physiological
responses to mild cold air in young and
older men 131
Iriki M → Hasebe Y
ISB News 55, 161
Isim S → Fasheun TA

Johnson DL → Beaubien EG

Kalediene R \rightarrow Stoupel E Kaneko M \rightarrow Takeoka M Kashimura O \rightarrow Takeoka M Kashimura O \rightarrow Terasawa K Katsouyanni K \rightarrow Tselepidaki IG Klein GH: Time-resolved empirical modelling of seasonal development during phenologically opaque periods 70

Langford IH, Bentham G: The potential effects of climate change on winter mortality in England and Wales 141 Li X, Tokura H, Midorikawa T: The effects of two different types of clothing on seasonal cold acclimation of thermophysiological responses 40 Li X, Tokura H, Midorikawa T: The effects of two different types of clothing on seasonal warm acclimatization 111 Lindner $J \to H\ddot{o}ppe$ P

Martfel J → Stoupel E

Matsumoto K → Takeoka M

Midorikawa T → Li X

Miller DR → Yang X

Montgomery ME → Yang X

Moos WS, Randall W: Patterns of human reproduction and geographic latitude 84

Moustris C → Tselepidaki IG

Mukhopadhyay S, Selvamurthy W, Ray US: Auditory evoked responses in tropical men during sojourn over the arctic region 67

Munuera Giner M, Carrión García JS:

Daily variations of *Alternaria* spores in the city of Murcia (semi-arid southeastern Spain). Relationship with weather variables 176

Nakao M → Inoue Y Noro H → Ohtsuka Y Nunez M, Forgan B, Roy C: Estimating ultraviolet radiation at the earth's surface 5

Ohtsuka Y, Yabunaka N, Watanabe I, Noro H, Fujisawa H, Agishi Y: Thermal stress and diabetic complications 57
Ologun AG → Fasheun TA
Osada H → Takeoka M
Ovoleye AK → Fasheun TA

Pantazopoulou A → Tselepidaki IG Pantis JD, Sgardelis SP, Stamou GP: Asphodelus aestivus, an example of synchronization with the climate periodicity 28

Persinger MA, Psych C: Sudden unexpected death in epileptics following sudden, intense, increases in geomagnetic activity: prevalence of effect and potential mechanisms 180

Petrauskiene J \rightarrow Stoupel E Praml G \rightarrow Höppe P Psych C \rightarrow Persinger MA Purkayastha SS \rightarrow Bhaumik G

Ramcharan $S \rightarrow Rose MS$

Ramcharan S → Verhoef MJ
Randall W → Moos WS
Rawal SB, Singh MV, Tyagi AK,
Selvamurthy W, Chaudhuri BN: Effect
of yogic exercises on thyroid function in
subjects resident at sea level upon
exposure to high altitude 44
Ray US → Mukhopadhyay S

Rose MS, Verhoef MJ, Ramcharan S: The relationship between chinook conditions and women's illness-related behaviours 156

Rose MS \rightarrow Verhoef MJ Roy C \rightarrow Nunez M Rueff LR \rightarrow Grant RH

Sakai A → Takeoka M
Sakai A → Terasawa K
Saxena DK: Effect of hypoxia by
intermittent altitude exposure on semen
characteristics and testicular morphology
of male rhesus monkeys 137
Scheidt AB → Grant RH
Schwartz MD: Monitoring global change
with phenology: the case of the spring
green wave 18

Selvamurthy W \rightarrow Mukhopadhyay S Selvamurthy W \rightarrow Bhaumik G Selvamurthy W \rightarrow Rawal SB Sgardelis SP \rightarrow Pantis JD Shido O \rightarrow Tanabe M Shimshoni M \rightarrow Stoupel E Singh MV \rightarrow Rawal SB Srivastava KK \rightarrow Bhaumik G Stamou GP \rightarrow Pantis JD Stein N \rightarrow Stoupel E Stoupel E, Abramson E, Sulkes J, Martí

Stoupel E, Abramson E, Sulkes J, Martfel J, Stein N, Handelman M, Shimshoni M, Zadka P, Gabbay U: Relationship between suicide and myocardial infarction with regard to changing physical environmental conditions 199

Stoupel E, Petrauskiene J, Kalediene R, Abramson E, Sulkes J: Clinical cosmobiology: the Lithuanian study 1990–1992 204

Stoupel EG, Abramson E, Gabbay U: Relationship between immunoglobulin levels and extremes of solar activity 89 Sulkes J → Stoupel E

Sulkes $J \rightarrow$ Stoupel E Sullivan JH \rightarrow Yang X

Takahasi K → Hasebe Y Takeoka M, Fujiwara T, Sakai A, Yanagidaira Y, Kaneko M, Osada H, Kashimura O, Asano K, Matsumoto K, Ueda G: Cardio-pulmonary function of cyclists competing on an ascending mountain course between altidudes of 1400 m and 2800 m 102

Takeoka M → Terasawa K

Tanabe M, Shido O: Changes in body core temperatures and heat balance after an abrupt release of lower body negative pressure in humans 48

Teeter RG → Deyhim F

Terasawa K, Sakai A, Yanagidaira Y,
Takeoka M, Asano K, Fujiwara T,
Yanagisawa K, Kashimura O, Ueda G:
Cardiopulmonary function in bicycle
racing over mountainous terrain at
moderate altitude 126

Tokura $H \rightarrow Li X$ Tokura $H \rightarrow Li X$

Touloumi G → Tselepidaki IG Tselepidaki IG, Asimakopoulos DN, Katsouyanni K, Moustris C, Touloumi

G, Pantazopoulou A: The use of a complex thermohygrometric index in predicting adverse health effects in Athens 194

Tyagi AK → Rawal SB

Ueda $G \rightarrow$ Takeoka M Ueda $G \rightarrow$ Terasawa K Ueda H \rightarrow Inoue Y

Verhoef MJ, Rose MS, Ramcharan S: The relationship between chinook condition and women's physical and mental wellbeing 148

Verhoef MJ → Rose MS

Watanabe I \rightarrow Ohtsuka Y Whereat EB \rightarrow Yang X Wittigh V. B. Hanging Ot. Area of

Wittich K-P, Hansing O: Area-averaged vegetative cover fraction estimated from satellite data 209

Yabunaka N → Ohtsuka Y
Yanagidaira Y → Takeoka M
Yanagidaira Y → Terasawa K
Yanagisawa K → Terasawa K
Yang X, Heisler GM, Montgomery ME,
Sullivan JH, Whereat EB, Miller DR:
Radiative properties of hardwood leaves
to ultraviolet irradiation 60

Zadka P → Stoupel E